WHAT IS CLAIMED IS:

1. A tripod constant velocity universal joint including an outer joint member having three axial track grooves in the inner periphery and roller guide surfaces formed in the opposed side walls of each track groove, a tripod member having three radially projecting trunnion journals, and rollers rotatable around the respective trunnion journals through a plurality of needle rollers and received in the track grooves of said outer joint member, each roller being guided in the outer peripheral surface by said roller guide surfaces, wherein contact between said roller and said roller guide surfaces is circular contact whose contact ratio is 1.01 or above and the width dimension of said roller is reduced to the extent that the contact ellipse produced in said roller during the application of a predetermined torque does not deviate from the end surface of said roller.

2. A tripod constant velocity universal joint as set forth in Claim 1, wherein the contact ratio of said roller to said roller guide surface is so set that the contact surface pressure produced on said roller during the application of a predetermined torque is not more than the contact surface pressure produced between said trunnion journal and said needle rollers.

3. A tripod constant velocity universal joint as set forth in Claim 1, wherein the contact ratio of said roller to said roller guide surface is 1.02 - 1.2.

4. A tripod constant velocity universal joint as set forth in Claim 1, wherein the ratio Ls/do of the width (Ls) to the outer diameter (do) of said roller is 0.32 or below.

5. A tripod constant velocity universal joint as set forth in Claim 4, wherein the ratio Ls/do of the width (Ls) to the outer diameter (do) of said roller is 0.24 - 0.27.

6. A tripod constant velocity universal joint as set forth in Claim 1, wherein the portion of said roller guide surface corresponding to the end of said roller is formed with a relief portion.

7. A tripod constant velocity universal joint as set forth in Claim 6, wherein said relief portion is in the form of an arc smoothly connected to said roller guide surface.

8. A tripod constant velocity universal joint including an outer joint member having axially extending track grooves formed at three circumferentially equispaced

positions in the inner periphery, a tripod member having a trunnion barrel adapted to be fitted to a shaft for torque transmission and trunnion journals radially projecting from three circumferentially equispaced positions in said trunnion barrel, and rollers respectively attached to said trunnion journals for rotation through a plurality of needle rollers and received in the track grooves, each roller being guided at its outer peripheral surface by roller guide surfaces formed in opposite lateral walls of said track groove, wherein the skew angle of said needle rollers is controlled so that it is within a predetermined specified value.

9. A tripod constant velocity universal joint as set forth in Claim 8, wherein the skew angle of the needle rollers which is caused by the radial clearances in said needle rollers in an annular space between said roller and said trunnion journal is controlled so that it is within a predetermined specified value.

10. A tripod constant velocity universal joint as set forth in Claim 8, wherein said skew angle ($\theta 2$) is in the range of $4.0^{\circ} - 4.5^{\circ}$.

11. A tripod constant velocity universal joint as set forth in Claim 8, wherein the skew angle ($\theta 1$) of the

needle rollers which can be produced by the circumferential clearances is larger than the skew angle (θ 2) of the needle rollers which can be produced by the radial clearances in an annular space between said roller and said trunnion journal.

12. A tripod constant velocity universal joint as set forth in Claim 8, wherein the contact ratio between said roller and said roller guide surfaces is 1.02 - 1.2 and the width dimension of said roller is reduced to such a degree that the contact ellipse produced in said roller does not deviate from the end surface of the roller during the application of a predetermined torque.

13. A tripod constant velocity universal joint as set forth in Claims 12, wherein the ratio (Ls/do) of the width (Ls) to the outer diameter (do) of said roller is in the range of 0.24 - 0.27.

14. A tripod constant velocity universal joint as set forth in Claim 8, wherein the width dimension of said rollers and the length of said needle rollers are so set that the contact surface pressure produced between said roller and said roller guide surfaces is substantially equal to the contact surface pressure produced between said trunnion journal and said needle rollers.

15. A tripod constant velocity universal joint including an outer joint member having axially extending track grooves formed at three circumferentially equispaced positions in the inner periphery, a tripod member having a trunnion barrel adapted to be fitted to a shaft for torque transmission and trunnion journals radially projecting from three circumferentially equispaced positions in said trunnion barrel, and rollers each rotatable around the associated trunnion journal for rotation through a plurality of needle rollers and received in the track grooves, each roller being guided at its outer peripheral surface by roller guide surfaces formed in opposite lateral walls of said track groove, wherein the torsional strength of said tripod member and the torsional strength of the smallest outer diameter portion of said shaft are set to be substantially equal, and the surface pressure on said trunnion journals in rolling contact with said needle rollers is allowed up to a predetermined value.

16. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio dr/SDj of the outer diameter dr of said trunnion barrel to the outer diameter SDj of the trunnion is 0.65-0.70.

17. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio ds/PCD of the diameter

ds of said shaft to the pitch circle diameter PCD of said roller guide surfaces is 0.50-0.55.

18. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio D2/D1 of the minor inner diameter D2 to the major inner diameter D1 of said outer joint member is 0.66-0.72.

19. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio Ls/Ds of the width Ls to the outer diameter Ds of said rollers is 0.24-0.27.

20. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio (Ln/Dj) of the length Ln of said needle rollers to the trunnion journal diameter Dj is 0.47 - 0.50.

21. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio Dj/Ds of the trunnion journal diameter Dj to the roller outer diameter Ds is 0.54-0.57.

22. A tripod constant velocity universal joint as set forth in Claim 15, wherein the ratio Dj/d of the trunnion journal diameter Dj to the diameter d of said shaft is 0.83-0.86.

23. A tripod constant velocity universal joint as set forth in Claim 15, wherein the roots of the said trunnion barrel and said trunnion journal are of two-step shape, and the corner at said trunnion journal is one R surface continuously extending with a predetermined radius of curvature.